

## PATENT CLAIMS

1. Method for identifying genes with site-specific or site preferred expression in specific target cells present in a cell environment different or not from that of their origin,

**characterized in** that the target cells initially are detected and isolated by repeated immuno-magnetic procedures in order to obtain up to 100% specific target cells before exposing the said target cells to known gene cloning procedures, wherein unknown genes with differences in levels of mRNA expressions in the target cells isolated from different tissues, are compared.

2. Method according to claim 1,

**characterized in** that the used target cells are malignant cells obtained from solid primary or recurrent tumors; and/or from metastases from such tumors to lymph nodes; and/or blood; and/or bone marrow; and/or bone tissue; and/or liver; and/or lungs; and/or central nervous system; and/or malignant pleural effusions and ascites, urine; and/or cerebral spinal fluid; and/or other organ sites.

3. Method according to ~~claims 1-2,~~ <sup>claim 1</sup>

**characterized in** that the malignant cells are isolated from single cell suspensions prepared from solid tumor manifestations; and/or from mononuclear cell fractions obtained from bone marrow or blood samples; and/or from cells present in other body fluids.

4. Method according to ~~claims 1-2,~~ <sup>claim 1</sup>

**characterized in** that the malignant cells used are *in vitro* cultivated human tumor cells; and/or human tumor cells grown in specific tissues in immunodeficient animals; and/or experimental human tumor metastases in such animals.

5. Method according to ~~claims 1-4,~~ <sup>claim 1</sup>

**characterized in** that RNA and/or DNA are extracted from the isolated cells.

6. Method according to claim 5,

**characterized in** that the extracted nucleic acids are used for gene cloning purposes.

7. Method according to the above claims,  
**characterized in** that the said gene cloning method is the differential display or the subtractive hybridization approaches, or any other procedure that can be used to identify genes with differential expression.

8. Method according to claim 7,  
**characterized in** that amplified cDNAs obtained from malignant cells selected from different sites are studied and compared on sequencing gels, and where those with interesting site-specific or site-preferenced patterns are sequenced and identified.

9. Method according to claim 8,  
**characterized in** that the expression patterns of identified gene sequences are studied on material obtained from all relevant tumor cell sites described in claims

10. Method according to ~~the preceding claims~~ <sup>claim 1</sup>,  
**characterized in** that previously unknown genes identified in preceding claims are used for gene therapy purposes, and/or as targets for procedures aimed at altering or inactivating the genes or their products.

11. Use of the method according to claim 1, to obtain specific gene sequences and their expression products in target cells present in cell environments different or not from their origin.

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